APRIL/MAY 2025

CEL32/BEL32 — ANALOG ELECTRONICS

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

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1. What is a multistage amplifiers?
2. How to calculate Gain in Amplifier?
3. What is a positive feedback?
4. What are the advantages of negative feedback?
5. Define CMRR?
6. What is offset null in OP-AMP?
7. What is an inverting adder?
8. List the application of active filters.
9. Give Barkhausen criterion for oscillation?
10. List any two applications of crystal oscillator.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Distinguish between Class A and Class B power amplifiers.

Or

(b) Explain the gain and frequency response action of push-pull power amplifiers.

12. (a) Write basic concept of feedback amplifiers and their advantages.

Or

(b) Explain gain stability in an amplifier.

13. (a) Inverting amplifier.

Or

(b) Derive an expression for closed loop gain of an inverting amplifier.

14. (a) Explain the action of an adder using Op-AMP.

Or

(b) Explain the action of a differentiator.

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15. (a) Explain the action of Wiens bridge oscillator.

Or

(b) Explain the action of Schmitt trigger.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain power dissipation and output power of amplifiers.

17. Explain the input and output resistance in the case of various types of feedback.

18. Explain the various offset parameters of OP-AMP.

19. Explain the action of sine and square waveform generators.

20. Explain the basics multivibrators and explain bistable multivibrators.

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